

GLOBAL TALENT SEARCH EXAMINATION

SCIENCE

Class : VII

Max Marks : 80

Time : 11:00 to 12:30 noon

Instructions to Candidates :

01. This question paper has 40 objective questions. In addition to this question paper, you are also given an answer-sheet.
02. Read the instructions carefully for each section before attempting it.
03. For each correct answer **2 marks** will be awarded and there is no negative marking.
04. On the answer-sheet, fill up all the entries carefully in the space provided, **ONLY IN BLOCK CAPITAL LETTERS.**
05. Incomplete / incorrect / carelessly filled information may disqualify your candidature.
06. On the answer-sheet, use **PENCIL / BLUE or BLACK BALL PEN.**
07. No extra sheet will be provided for rough-work. Use the space available in the paper for your rough- work.
08. Use of calculator is not permitted.
09. No student is permitted to leave the examination hall before time is complete.
10. Use of unfair means shall invite cancellation of the test.

Roll No.

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Centre No.

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Male / Female _____

Name of the candidate : (In English only, as you would like it to be printed on the certificate).

Signature of the
invigilator

Signature of
the candidate

AMITY INSTITUTE FOR COMPETITIVE EXAMINATIONS

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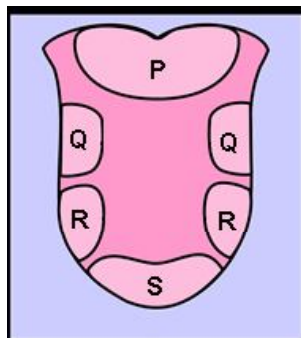
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Each question has four alternatives marked (A), (B), (C) and (D), but only one of these alternatives is the correct answer.

1. Tongue is a muscular organ. It has many functions. One of its functions is that it gives taste sensation. Surprisingly, different parts of the tongue give different taste sensations.



Different taste sensation parts are marked as P, Q, R and S

Which one of the following gives the correct relation of parts of the tongue and the taste sensations these can detect ?

	P	Q	R	S
(A)	salt	bitter	sour	sweet
(B)	bitter	sour	sweet	salt
(C)	bitter	sour	salt	sweet
(D)	bitter	salt	sour	sweet

2. A train leaves New Delhi railway station at 10.00 AM to reach destination *D* at 220 km from New Delhi. After half an hour it crosses a railway station *A* at distance of 40 km from New Delhi. After another 45 minutes, it crosses another railway station *B* at a distance of 100 km from New Delhi. If the train maintains the same uniform speed, it would reach the destination *D*

- (A) 00.15 PM (B) at 00.45 PM
(C) 01.15 PM (D) at 01.45 PM

3. Tick-mark(✓) the *incorrect* statement :

- (A) The uppermost of the skin is dead
(B) Silk fibre is made up of hardened proteins or carbohydrates
(C) Washing of sheared wool to remove grease, dust and dirt is called scouring
(D) Soft silk yarn is as strong as a comparable thread of steel

4. When electric current is passed through a metallic wire, heat is produced in it. The amount of heat produced in the wire depends on the nature of its material, its length and its thickness. Thus, for different requirements, the wires of different materials and different lengths and thicknesses are used. Connect the wires given in Column I with their uses in column II and tick-mark (✓) the correct relation.

Column I

Column II

- | | |
|---------------------|--|
| (a) Copper wire | (i) heating wire in heater or electric press |
| (b) Nichrome wires | (ii) fuse wire in an electric circuit |
| (c) Tungsten wire | (iii) connecting wire in circuit |
| (d) Steel wool wire | (iv) thin filament of electric bulb |

(A) (a) – iii, (b) – ii, (c) – iv, (d) – i

(B) (a) – iii, (b) – i, (c) – iv, (d) – ii

(C) (a) – iii, (b) – iv, (c) – ii, (d) – i

(D) (a) – iii, (b) – iv, (c) – i, (d) – ii

5. Which one of the following is different from the other three ?

(A) Liver (B) Heart

(C) Spleen (D) Lungs

6. Which one of the following types of carbohydrates is found mostly in plants ?

(A) Cellulose (B) Maltose

(C) Starch (D) Glucose

7. The water below the surface of the ground (depth from the ground may be less than a metre or may be several metres) is called ground water. The rainwater and water from other sources such as rivers and ponds goes down through the soil and fills the empty spaces and cracks deep below the ground. This process of going down of water into the ground is called

(A) percolation (B) seepage

(C) submersion (D) infiltration

8. Match the statements of column I and column II and tick-mark(✓) the correct matching.

Column I

Column II

- | | |
|-----------------------------------|-------------------|
| (a) Silkworm breeding | (i) apiculture |
| (b) Forestry | (ii) floriculture |
| (c) Culture of flowers and plants | (iii) moriculture |
| (d) Beekeeping | (iv) silviculture |
| (e) Culture of mulberry | (v) sericulture |

(A) (a) - v, (b) - iv, (c) - ii, (d) - iii, (e) - i

(B) (a) - iv, (b) - v, (c) - ii, (d) - iii, (e) - i

(C) (a) - v, (b) - iv, (c) - ii, (d) - i, (e) - iii

(D) (a) - iv, (b) - v, (c) - ii, (d) - i, (e) - iii

9. Clayey and loamy soils are both suitable for growing ----A----, because such soils are good at retaining water. For growing ----B---- soils rich in clay and organic matter and having a good capacity to retain water are ideal. For growing ----C----, loamy soils which drain water easily, are required. Sandy-loam or loam which can drain water easily and can hold plenty of air are more suitable for growing ----D----.

Here A, B, C and D stand respectively, for

- (A) pulses, cereals like wheat and gram, paddy, cotton
(B) cereals like wheat and gram, paddy, pulses, cotton
(C) cereals like wheat and gram, pulses, paddy, cotton
(D) cereals like wheat and gram, paddy, cotton, pulses

10. If an indicator turns acidic solution to dark pink (magenta) and basic solution to green, then the indicator used is

- | | |
|---------------------|----------------|
| (A) phenolphthalein | (B) china rose |
| (C) methyl orange | (D) litmus |

11. Match the statements of column I and column II and tick-mark(✓) the correct relation.

Column I

Column II

- | | |
|--------------|-------------------|
| (a) Host | (i) bacteria |
| (b) Leaves | (ii) nitrogen |
| (c) Starch | (iii) stomata |
| (d) Soil | (iv) parasite |
| (e) Proteins | (v) carbohydrates |

(A) (a) - iv, (b) - iii, (c) - ii, (d) - v, (e) - i

(B) (a) - iv, (b) - iii, (c) - i, (d) - v, (e) - ii

(C) (a) - iv, (b) - iii, (c) - v, (d) - ii, (e) - i

(D) (a) - iv, (b) - iii, (c) - v, (d) - i, (e) - ii

12. A cycle with wooden handles is lying outside on a cold winter night. Early in the morning when a person touches the handle, it does not appear to be much cold, but when he touches the other parts of the metallic frame these appear to be very cold. This is because

(A) different parts of cycle are at different temperatures

(B) wood is a bad conductor and metal is a good conductor of heat

(C) the person touches different parts of cycle at different times

(D) other parts of the metallic frame are colder than wooden handles

13. Which one of the following is *not* due to heating produced by the sun ?

(A) Growth of plants and vegetation

(B) Formation of day and night

(C) Formation of clouds and falling of rain and snow

(D) Formation of thunderstorms and cyclones

14. In asexual reproduction, plants can give rise to new plants without seeds or spores. In this case, new plants are produced from roots, stems, leaves and buds. Match the statements of column I and II and tick-mark(✓) the correct relation of reproduction.

Column I

Column II

- | | |
|---------------|--------------------------|
| (a) Leaves | (i) Roses |
| (b) Roots | (ii) Potatoes |
| (c) Spores | (iii) <i>Bryophyllum</i> |
| (d) Stems | (iv) Ferns |
| (e) Buds/eyes | (v) Sweet potatoes |

(A) (a) - iii, (b) - v, (c) - ii, (d) - iv, (e) - i

(B) (a) - iii, (b) - v, (c) - ii, (d) - i, (e) - iv

(C) (a) - iii, (b) - v, (c) - iv, (d) - ii, (e) - i

(D) (a) - iii, (b) - v, (c) - iv, (d) - i, (e) - ii

15. Which one of the following is different from the other three, regarding pattern of blowing of wind ?

- | | |
|-------------|---------------|
| (A) Tornado | (B) Typhoon |
| (C) Cyclone | (D) Hurricane |

16. An aeroplane has large wings. The upper surfaces of the wings are bulged upwards whereas lower surfaces are almost flat. This is done so that pressure of air below the wings is more than that on their tops. This creates a pressure difference in the upward direction and keeps the aeroplane floating in air. When the aeroplane is flying in the air, then

- (A) the velocity of the wind is same on the upper as well as lower surfaces of the wings
- (B) the velocity of wind is larger on the upper surfaces of the wings than that on the lower surfaces
- (C) the velocity of wind is smaller on the upper surfaces of the wings than that on the lower surfaces
- (D) the velocity of wind is sometimes larger and sometimes smaller on the upper surfaces than on the lower surfaces

17. Some common compounds are given in column I and their chemical names are given in column II. Relate them properly and tick-mark(\surd) the correct relation.

Column I

Column II

- | | |
|------------------|-------------------------|
| (a) Caustic soda | (i) Sodium bicarbonate |
| (b) Chalk | (ii) Calcium hydroxide |
| (c) Common salt | (iii) Calcium carbonate |
| (d) Baking soda | (iv) Sodium hydroxide |
| (e) Lime water | (v) Sodium chloride |

(A) (a) - v, (b) - iii, (c) - iv, (d) - i, (e) - ii

(B) (a) - iv, (b) - iii, (c) - v, (d) - i, (e) - ii

(C) (a) - iv, (b) - iii, (c) - v, (d) - ii, (e) - i

(D) (a) - iv, (b) - v, (c) - iii, (d) - i, (e) - ii

18. Before buying electric bulb, tube or CFL look for ISI mark. The ISI mark ensures that the appliance is safe and the wastage of energy is minimum. Here, CFL and ISI stand, respectively, for

- (A) Condensed filament lamp and Indian Standards Institute
- (B) Compact filament lamp and Indian Standards Institute
- (C) Compact fluorescent lamp and Indian Standardised Instruments
- (D) Compact fluorescent lamp and Indian Standards Institute

19. After heavy exercise, a person gets muscle cramps. These cramps are due to the accumulation of ----A---- in the muscles. We get relief from cramps after hot water bath or a massage. Hot water bath or massage improves circulation of blood. As a result, the supply of oxygen to the muscles increases. The increase in the supply of oxygen results in the complete breakdown of ----A---- into ----B---- and water. Here A and B are, respectively,

- (A) alcohol and carbon dioxide
- (B) lactic acid and carbon dioxide
- (C) alcohol and oxygen
- (D) lactic acid and oxygen

20. Some gases are given in column I and their characteristic properties are given in column II. Relate them properly and tick-mark(✓) the correct matching.

Column I

Column II

- | | |
|--------------------|------------------------------------|
| (a) Carbon dioxide | (i) supports burning |
| (b) Nitrogen | (ii) turns lime water milky |
| (c) Oxygen | (iii) absorbs UV rays from the sun |
| (d) Ozone | (iv) maximum volume in air |

- (A) (a) - ii, (b) - iv, (c) - i, (d) - iii
(B) (a) - ii, (b) - i, (c) - iv, (d) - iii
(C) (a) - iii, (b) - iv, (c) - ii, (d) - i
(D) (a) - iii, (b) - iv, (c) - i, (d) - ii

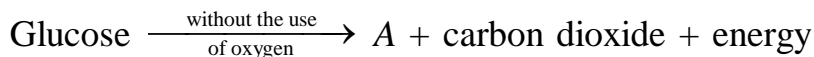
21. Tick-mark(✓) the *incorrect* statement.

- (A) All changes in the weather are caused by the sun
(B) Reindeers and leopards are the animals of tropical rainforests
(C) Large ears of elephant also help it to keep cool in the hot and humid climate of the rainforests
(D) Duration of nights is either very small or very large in polar regions of the earth

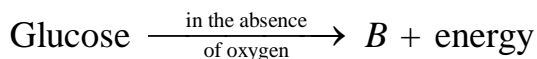
22. All the organisms including human beings require food for growth, repair and functioning of the body. The components of food such as carbohydrates, proteins, etc. are complex substances. The breakdown of these complex components of food into simpler substances is called digestion. Which of the following gives the proper stages of digestion in human beings ?

- (A) Ingestion, absorption, assimilation, digestion, egestion
(B) Ingestion, absorption, digestion, assimilation, egestion
(C) Ingestion, digestion, absorption, assimilation, egestion
(D) Ingestion, digestion, assimilation, absorption, egestion

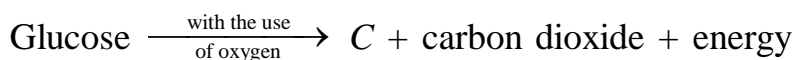
23. In anaerobic respiration in some organisms as yeast



In anaerobic respiration in muscles



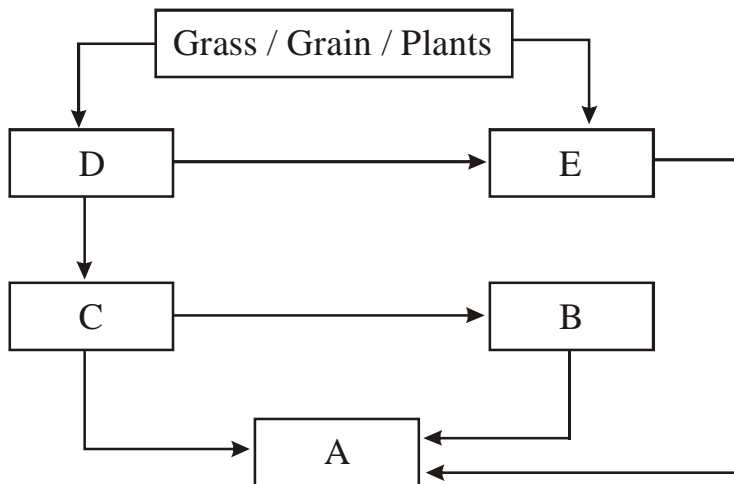
In aerobic respiration



In the above chemical reactions, A, B, C are, respectively,

- (A) alcohol, carbon dioxide, water
 - (B) alcohol, lactic acid, water
 - (C) water, carbon dioxide, alcohol
 - (D) water, lactic acid, alcohol
24. Which one of the following cars is moving faster than the other three ? All the cars are moving with their respective uniform speeds.
- (A) Car P covers a distance of 130 m in 4 seconds
 - (B) Car Q covers a distance of 300 m in 10 seconds
 - (C) Car R covers a distance of 385 km in 3.5 hours
 - (D) Car S covers a distance of 50 km in 25 minutes
25. Tick-mark(✓) the *incorrect* statement from the following.
- (A) Chocolates, sweets, cold drinks and other sugar products are the major culprits of tooth decay
 - (B) Stainless steel is a compound of iron, carbon and metals like nickel, chromium and manganese
 - (C) Polar bear has two thick layers of fur. These keep it warm in cold weather
 - (D) The mode of transfer of heat which does not require any material medium is called radiation

26. (i) Grass-hoppers/insects eat grass.
 (ii) Birds eat grain and insects/grass-hoppers.
 (iii) Frogs eat insects/grass-hoppers.
 (iv) Snakes eat frogs.
 (v) Eagles/Hawks eat snakes, frogs and birds.



In the above food web, C represents

- (A) snakes (B) eagles / hawks
 (C) frogs (D) birds
27. Animals are adapted to survive in the conditions in which they live. Features and habits that help animals to adapt to their surroundings are a result of the process of evolution. Which one of the following characteristics is comparatively not necessary for animals of tropical rainforests ?
- (A) Ability to camouflage (B) Bright colours
 (C) Wide and large paws (D) Strong tail
28. Whatever the position of an object, the image formed is always erect. This can be possible with the help of
- (A) a concave mirror or a concave lens
 (B) a convex mirror or a convex lens
 (C) a convex mirror or a concave lens
 (D) a concave mirror or a convex lens

29. In the following mesh many terms, connected with *heat* are hidden either along vertical columns or along horizontal columns.

H	E	A	D	U	M	B	O	I	L	O	G	I	N
R	A	D	I	A	M	O	U	N	E	S	T	O	M
A	B	C	E	L	S	I	U	S	A	C	T	O	S
D	O	O	L	C	O	N	D	U	C	T	I	O	N
I	U	N	E	O	T	C	O	L	D	F	E	E	T
A	T	V	T	B	H	C	D	A	F	I	N	A	A
T	H	E	R	M	O	M	E	T	E	R	G	R	P
I	E	C	A	A	T	O	H	O	B	E	L	T	S
O	A	T	T	E	M	P	E	R	A	T	U	R	E
N	T	I	N	D	O	T	H	E	R	A	D	I	A
A	E	O	U	I	M	P	U	T	O	A	L	A	X
B	R	N	N	E	T	H	E	R	L	O	U	D	S

How many terms, associated with heat is some way, are hidden in the above mesh ?

- (A) 12 (B) 11
(C) 10 (D) 9

30. Which one of the following three statements (given in each row) are *not* properly matched ?

<i>Column I</i>	<i>Column II</i>	<i>Column III</i>
(A) Carbon dioxide	lime water milky	calcium carbonate
(B) Proteins	amino acids	pulses
(C) Leaves	photosynthesis	release of carbon dioxide
(D) Soil	plants and vegetation	important for life on earth

31. Match the items in column I with those in column II and tick-mark (✓) the correct relation.

Column I

Column II

- | | |
|------------------------------|--|
| (a) Upper layer of soil | (i) smaller particles and packed tightly |
| (b) Sandy soil | (ii) dark in colour |
| (c) Middle layer of the soil | (iii) mixture of sand, clay and silt |
| (d) Clayey soil | (iv) large particles |
| (e) Loamy soil | (v) smaller amount of humus |

(A) (a) – ii, (b) – iv, (c) – i, (d) – v, (e) – iii

(B) (a) – ii, (b) – iv, (c) – v, (d) – iii, (e) – i

(C) (a) – ii, (b) – iv, (c) – v, (d) – i, (e) – iii

(D) (a) – iii, (b) – iv, (c) – v, (d) – i, (e) – ii

32. Tick-mark(✓) the correct statement from the following.

- (A) All the plants are autotrophs
- (B) Plants can synthesise carbohydrates as well as fats and proteins
- (C) Proteins are nitrogenous substances
- (D) Carbohydrates are made up of carbon, hydrogen and oxygen

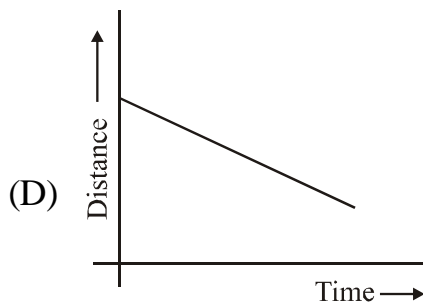
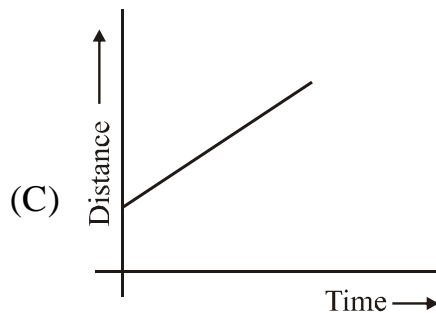
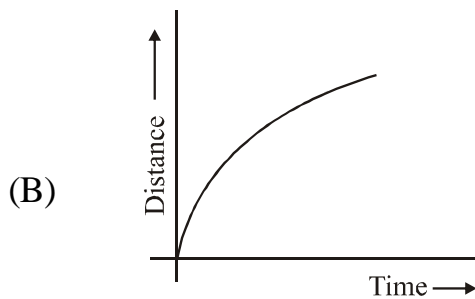
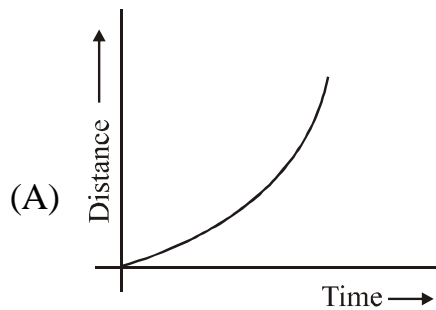
33. When you feel drowsy, your breathing rate

- | | |
|-----------------------|-------------------|
| (A) becomes irregular | (B) is not normal |
| (C) is slowed down | (D) increases |

34. Leaves produce food for the plant by the process of photosynthesis. Chlorophyll, sunlight, carbon dioxide and water are necessary to carry out the process of photosynthesis. Tick-mark(✓) the *wrong* statement.

- (A) Chlorophyll is present in green leaves of the plants
- (B) Chlorophyll is also present in violet and brown leaves of the plant
- (C) Chlorophyll is also present in red and brown leaves of the plants
- (D) Chlorophyll is present in all the coloured leaves of the plants

35. Which one of the following graphs shows that a body is moving with decreasing speed ?



36. The flowers which contains either only the pistil or only the stamens are called *unisexual flowers*. The flowers which contain both stamens and pistil are called *bisexual* flowers. Which one of the following have bisexual flowers ?

(A) Cucumber

(B) Mustard

(C) Papaya

(D) Corn

37. Some times we use many acids in our food. Which one of the following acids is not taken or eaten by us in our food ?

(A) Oxalic acid

(B) Hydrochloric acid

(C) Lactic acid

(D) Acetic acid

38. Tick-mark(✓) the *incorrect* statement.

(A) The process of fusion of the male and the female gamets is called reproduction

(B) The reproductive part of a plant is flower

(C) Mature ovary forms the stamen/pistil

(D) *Bryophyllum* can reproduce by its leaves

39. The ----A---- which convert the dead plants and animals to ----B---- are known as ----C----. These ----A---- play an important role in cycling of nutrients in the forest. The presence of ----B---- ensures that the nutrients of the dead plants and animals are released into the soil. From there, these nutrients are again absorbed by the roots of the living plants. In this way, the nutrients are ----D----. So, nothing goes waste in the forest.

Here *A*, *B*, *C* and *D* are respectively

- (A) decomposers, microorganisms, humus, recycled
- (B) microorganisms, decomposers, humus, recycled
- (C) microorganisms, humus, decomposers, recycled
- (D) decomposers, humus, microorganisms, recycled

40. Which one of the following acids is secreted in our body to digest food ?

- (A) Acetic acid
- (B) Carbonic acid
- (C) Hydrochloric acid
- (D) Nitric acid

ANSWERS CLASS VII (SCIENCE)

1	C	2	B	3	B	4	B	5	A
6	C	7	D	8	C	9	B	10	B
11	D	12	B	13	B	14	D	15	A
16	B	17	B	18	D	19	B	20	A
21	B	22	C	23	B	24	D	25	B
26	C	27	C	28	C	29	B	30	C
31	C	32	A	33	C	34	D	35	B
36	B	37	B	38	C	39	C	40	C